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IN THE CLAIMS

No claims are being amended by the present paper. The following is a complete listing of the claims.

1. (Previously Presented) In a multiple-access OFDM-CDMA system, a method for processing data for transmission over a wireless communication channel, comprising:
coding a data stream in accordance with a particular coding scheme to provide a stream of data symbols;
spreading the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;
transforming the spread data in accordance with a particular transformation to provide a stream of OFDM symbols;
scaling the stream of OFDM symbols in accordance with a particular gain selected for the data stream, wherein the particular gain is based upon an estimated signal quality; and
transmitting the scaled OFDM symbols over the communication channel.
2. (Original) The method of claim 1, further comprising: appending a cyclic prefix to each OFDM symbol to provide a corresponding transmission symbol, wherein transmission symbols are scaled and transmitted over the communication channel.
3. (Original) The method of claim 1, further comprising: covering the scaled OFDM symbols with a cover code.
4. (Original) The method of claim 3, wherein the cover code has a length that is multiple integer times a length of the OFDM symbol.
5. (Original) The method of claim 3, wherein the cover code has a length that is multiple integer times a length of a transmission symbol formed by appending a cyclic prefix to an OFDM symbol.

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6. (Original) The method of claim 1, wherein the data symbol stream comprises coded bits.

7. (Original) The method of claim 1, wherein the data symbol stream comprises modulation symbols derived based on a particular modulation scheme.

8. (Original) The method of claim 1, further comprising: transmitting a pilot along with the scaled OFDM symbols over the communication channel.

9. (Original) The method of claim 1, wherein the spreading codes are Walsh codes.

10. (Original) The method of claim 1, wherein the spreading codes are orthogonal codes.

11. (Original) The method of claim 1, wherein the spreading codes are pseudo-orthogonal codes.

12. (Original) The method of claim 1, wherein the transformation is an inverse Fourier transform.

13. (Original) The method of claim 9, wherein the Walsh codes have a length equal to the dimension of the transformation.

14. (Original) The method of claim 1, further comprising: adjusting the spreading based on a data rate of the data stream.

15. (Original) The method of claim 14, wherein the spreading is adjusted by assigning a plurality of spreading codes to the data stream.

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16. (Original) The method of claim 14, wherein the spreading is adjusted by assigning one or more spreading codes of shorter length to the data stream.

17. (Original) The method of claim 14, wherein the spreading is effectively not performed when the data rate of the data stream reaches a particular threshold data rate.

18. (Original) The method of claim 14, further comprising: scaling transmit power for the data stream based on the data rate.

19. (Original) The method of claim 1, further comprising: adjusting the gain to adjust transmit power for the data stream.

20. (Original) The method of claim 1, wherein the scaled OFDM symbols are transmitted on a downlink from a base station to a terminal.

21. (Original) The method of claim 1, wherein the scaled OFDM symbols are transmitted on an uplink from a terminal to a base station.

22. (Previously Presented) In a multiple-access OFDM-CDMA system, a method for processing data for transmission over a wireless communication channel, comprising:
coding a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

spreading the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

transforming the spread data in accordance with an inverse Fourier transform to provide a stream of OFDM symbols;

appending a cyclic prefix to each OFDM symbol to provide a corresponding transmission symbol;

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scaling each transmission symbol in accordance with a particular gain selected for the data stream, wherein the particular gain is based upon an estimated signal quality responsive to a power control command of a particular multiple access power control scheme;
covering scaled transmission symbols with a cover code; and
transmitting the scaled transmission symbols over the communication channel.

23 – 34. (Cancelled).

35. (Previously Presented) A transmitter unit in a multiple-access OFDM-CDMA system, comprising:

a TX data processor operative to code a data stream in accordance with a particular coding scheme to provide a stream of data symbols;

a frequency-domain spreader operative to receive and spread the data symbol stream in a frequency domain with one or more spreading codes to provide spread data, wherein the one or more spreading codes are selected from a set of available spreading codes and assigned to the data stream;

a transformer operative to transform the spread data in accordance with a particular transformation to provide a stream of OFDM symbols;

a first multiplier operative to scale the stream of OFDM symbols in accordance with a particular gain selected for the data stream, wherein the particular gain is based upon an estimated signal quality; and

a transmitter operative to process the scaled OFDM symbols to provide a modulated signal and to transmit the modulated signal over the communication channel.

36. (Original) The transmitter unit of claim 35, further comprising: a cyclic prefix insertion element operative to repeat a portion of each OFDM symbol to provide a corresponding transmission symbol.

37. (Original) The transmitter unit of claim 35, further comprising: a second multiplier operative to cover the scaled OFDM symbols with a cover code.

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38. (Original) A base station comprising the transmitter unit of claim 35.

39. (Original) A terminal comprising the transmitter unit of claim 35.

40. (Cancelled)

41 – 48. (Cancelled).

49 – 52. (Cancelled)

53. (Previously Presented) A method for processing data for transmission over a wireless communication channel, comprising:

coding a data stream to provide a stream of data symbols;

applying one or more spreading codes to the stream of data symbols in a frequency domain to provide spread data;

generating a stream of OFDM symbols from the spread data; and

applying a gain to the stream of OFDM symbols based upon information regarding a communication channel over which at least some of the stream of OFDM symbols are to be transmitted.

54. (Previously Presented) The method of claim 53, wherein the information regarding a communication channel comprises an estimated signal quality of symbols transmitted over the communication channel.

55. (Previously Presented) The method of claim 53, wherein the information regarding a communication channel comprises feedback from a receiver of symbols over the communication channel.

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56. (Previously Presented) The method of claim 53, wherein the spreading codes are Walsh codes.
57. (Previously Presented) The method of claim 53, wherein the spreading codes are orthogonal codes.
58. (Previously Presented) The method of claim 53, wherein the spreading codes are pseudo-orthogonal codes.
59. (Previously Presented) The method of claim 53, further comprising: adjusting the spreading based on a data rate of the stream of data symbols.
60. (Previously Presented) The method of claim 59, wherein the spreading is adjusted by assigning a plurality of spreading codes to the stream of data symbols.
61. (Previously Presented) The method of claim 59, wherein the spreading is adjusted by assigning one or more spreading codes of shorter length to the stream of data symbols.
62. (Previously Presented) The method of claim 59, wherein the spreading is effectively not performed when the data rate of the data stream reaches a particular threshold data rate.
63. (Previously Presented) A circuit for processing information for transmission over a wireless communication channel, comprising:
a memory; and
a processor coupled with the memory, the processor capable of providing a stream of data symbols, applying one or more spreading codes to the stream of data symbols to provide spread data, and generate a stream of OFDM symbols from the spread data, the processor further capable of applying a gain to the stream of OFDM symbols based upon information regarding a

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communication channel over which at least some of the stream of OFDM symbols are to be transmitted.

64. (Previously Presented) The circuit of claim 63, wherein the information regarding a communication channel comprises an estimated signal quality of symbols transmitted over the communication channel.

65. (Previously Presented) The circuit of claim 63, wherein the information regarding a communication channel comprises feedback from a receiver of symbols over the communication channel.

66. (Previously Presented) The circuit of claim 63, wherein the spreading codes are Walsh codes.

67. (Previously Presented) The circuit of claim 63, wherein the spreading codes are orthogonal codes.

68. (Previously Presented) The circuit of claim 63, wherein the spreading codes are pseudo-orthogonal codes.

69. (Previously Presented) The circuit of claim 63, further comprising: adjusting the spreading based on a data rate of the stream of data symbols.

70. (Previously Presented) The circuit of claim 69, wherein the spreading is adjusted by assigning a plurality of spreading codes to the stream of data symbols.

71. (Previously Presented) The circuit of claim 69, wherein the spreading is adjusted by assigning one or more spreading codes of shorter length to the stream of data symbols.